



DUPLICATE

CASE NO. NJDE981876642

**SOIL REMEDIAL ACTION REPORT  
HIGH CONCENTRATION ARSENIC AREA**

**FORMER CELOTEX INDUSTRIAL PARK  
EDGEWATER, NEW JERSEY**

TRC Raviv Job No. 01C2084

*Prepared for:*

Edgewater Enterprises, L.L.C.  
525 River Road  
Edgewater, New Jersey 07020

*Prepared by:*

TRC Raviv Associates, Inc.  
57 East Willow Street  
Millburn, New Jersey 07041

July 29, 2004

**TRC Raviv Associates, Inc.**

57 E. Willow Street  
Millburn, New Jersey 07041-1497  
Telephone 973-564-6006  
Facsimile 973-564-6442

July 29, 2004

New Jersey Department of Environmental Protection  
Office of Brownfield Reuse  
401 East State Street  
P.O. Box 028  
Trenton, New Jersey 08625-0028

Attn: Mr. Stephen Kehayes, Case Manager

Re: *Soil Remedial Action Report, High Concentration Arsenic Area*  
Former Celotex Site  
Edgewater, New Jersey  
Case No. NJDE981876642  
TRC Raviv Job No. 01C2084

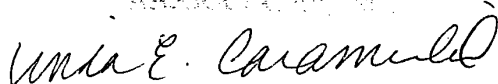
Dear Mr. Kehayes:

On behalf of Edgewater Enterprises, TRC Raviv Associates, Inc. (TRC Raviv) has enclosed one original and two copies of the *Soil Remedial Action Report, High Concentration Arsenic Area* for the above-referenced site.

If you have any questions or need additional information, please call.

Very truly yours,

TRC RAVIV ASSOCIATES, INC.



Linda E. Caramichael, P.E.  
Project Engineer



Daniel Nachman  
Senior Project Manager

2084/L/072804rarcovlet

c: Mr. Richard LaBarbiera, Edgewater Enterprises  
Mr. Richard Ho, USEPA  
Mr. Dennis Toft, Esq., Wolff & Samson  
Mr. Richard Crespi, Esq., Wolff & Samson

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**SOIL REMEDIAL ACTION REPORT  
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FORMER CELOTEX INDUSTRIAL PARK  
EDGEWATER, NEW JERSEY**

**1.0 INTRODUCTION**

TRC Raviv Associates, Inc. (TRC Raviv, formerly Dan Raviv Associates, Inc. or DRAI) has prepared this *Soil Remedial Action Report* (RAR) on behalf of Edgewater Enterprises, LLC for the former Celotex site (site) in Edgewater, New Jersey. This RAR was prepared pursuant to the Administrative Consent Order Amendment (ACO Amendment) entered into by Edgewater Enterprises and the New Jersey Department of Environmental Protection (NJDEP) in April 1999, as amended on June 21, 2002 (NJDEP, 1999 and 2002a), and in accordance with the NJDEP *Technical Requirements for Site Remediation* (TRSR) at N.J.A.C. 7.26E.

This RAR documents soil remedial actions conducted at the High Concentration Arsenic Area (HCAA), and two other hot-spot locations at the site, from July 2002 through May 2004. Remedial activities were performed in accordance with the NJDEP-approved July 29, 2002 *Soil Remedial Action Workplan – High Concentration Arsenic Area* (DRAI, 2002a and NJDEP, 2002b) and June 21, 2002 *Arsenic Hot Spot Removal Workplan* (DRAI, 2002b and NJDEP, 2002c).

**1.1 Report Organization**

In accordance with the TRSR (N.J.A.C. 7:26E-6.7), this RAR is organized as follows:

- Sections 1.0 and 2.0 include general background information regarding the history and physical setting of the site, and provide a summary of the remedial investigations for the site.
- Section 3.0 provides information regarding the completed remedial action for the HCAA, including: remediation standards; completion of the remedial action; site restoration/post remedial action activities; and information regarding the fill used.
- Section 4.0 provides a description of the excavation and disposal of contaminated soils at two “hot spot” locations outside of the HCAA.
- Section 5.0 provides a description of how the engineering and institutional controls will be monitored and maintained to ensure continued protection and describes compliance reporting.
- Section 6.0 presents references cited.

## 1.2 Site Description

The ACO Amendment identifies the site as being located at 1 River Road, and being comprised of Block 92, lots 3 and 4 and Block 91, p/o lot 4 on the tax maps of the Borough of Edgewater, Bergen County, New Jersey. The current tax map of the Borough of Edgewater identifies the site on Block 91, Lot 1 (the Site). The Site encompasses approximately 29.5 acres, and is located in what was historically an industrial area on the west bank of the Hudson River (Figure 1).

The HCAA, defined in the ACO Amendment as the area within the 1,000 parts per million (ppm) arsenic contour line, is estimated to encompass approximately 1.3 acres, located in the southwestern portion of the Site adjacent to River Road (Figure 2). The Arsenic Area, defined in the ACO Amendment as the area within the 100 ppm arsenic contour line, is estimated to encompass an additional approximately 2.3 acres (Figure 2). The site is currently undergoing residential and commercial development. The Quanta Resources Superfund Site, under the oversight of the United States Environmental Protection Agency (USEPA), is located to the south, directly adjacent to the site (see Section 2.5).

The following is a summary of the information collected as part of soil and ground water RI activities at the site. Refer to DRAI's *Final Soil Remedial Investigation Report – Arsenic Area* (DRAI, 2002c) and *Revised Ground Water Remedial Investigation Workplan* (DRAI, 2002d), for more detailed information about the soil and ground water RIs.

### 1.2.1 Geology

The HCAA is underlain by 8 to 15 feet (ft) of fill, which overlies 3 to 20 ft of native unconsolidated sediments. The fill material has been described as two distinct layers, the upper fill and lower fill.

In the on-site portion of the HCAA, the thickness of the upper fill material varies between 5 and 7 ft. The upper fill material is comprised of a dark brown sand and silt with rocks, and construction and demolition debris (wood, bricks, and concrete). This material was placed around 1988 to raise the elevation of the site, and is not related to former site operations.

The lower fill material varies in thickness from 3 to 10 ft, and was found to contain a reddish purple sand; gray clay with cobbles, brick and cement; black sand and silt with cobbles and gravel; wood and concrete. This layer is believed to have been deposited during the construction of the site in the late 1800s and/or early 1900s. It should also be noted that this fill material extends off site to the west and south, as opposed to the upper material which is limited to the site.

Native sediments are found beneath the lower fill material. Within the HCAA, the top layer of the native material is meadow mat; under the meadow mat there is a sand layer, then a silt layer which rests on bedrock. Native soils range in thickness from approximately 3 ft in the eastern portion of the HCAA to approximately 20 ft in the western portion on the HCAA. The primary water-bearing unit within the native material is the sand layer, which in the HCAA is separated from the overlying fill by the meadow mat layer (DRAI, 2002d).

Bedrock occurs from 14 to 35 ft below ground surface (bgs) in and around the HCAA. The top of the bedrock rises from the western to the eastern portion of the HCAA, and descends from the eastern edge of the HCAA eastward toward the Hudson River. Geotechnical borings drilled by Melick Tully in 1999 indicated bedrock at depths of 77 to 129 ft bgs near the river (DRAI, 2002c).

### **1.2.2 Hydrogeology**

Ground water occurs under the site at depths ranging from 8 to 18 ft bgs. In general, ground water flows to the east and northeast. There is a slight upward component to ground water flow from the bedrock to the overburden.

The water table in the HCAA occurs at approximately 9 ft bgs, and exists within the historic fill material that was brought in to raise the site grade for development, beginning in the 19th century. Specifically, the water table occurs within the lower fill unit, and there is a limited saturated thickness (2 to 4 ft) within this lower fill unit (from the water table down to the top of the meadow mat).

### **1.2.3 Topography**

The elevation at the site ranges from approximately 4 ft to 30 ft above mean sea level (msl). The higher elevations are found on the southeastern portions of the site. The lower elevations are found on the northeastern portions of the site.

## 2.0 SUMMARY OF REMEDIAL INVESTIGATIONS

Several environmental investigations and an interim remedial action were completed at the site in and around the HCAA from 1997 through 2003. These included a soil remedial investigation (RI), remedial action selection, interim soil remedial action (i.e., hot spot removal), and a ground water RI.

### 2.1 Soil Remedial Investigation

One of the principal goals of the soil RI was to delineate the vertical and horizontal extent of high arsenic concentrations detected in soil during previous investigations carried out from 1997 through 2001 by Enviro-Sciences Inc. (ESI) and Environmental Waste Management Associates (EWMA). A thorough soil delineation program was conducted by DRAI in 2002 pursuant to the NJDEP-approved March 28, 2002 *Soil Remedial Investigation Workplan* (RIW) (DRAI, 2002e and NJDEP, 2002d). Since approval of the Soil RIW, several conversations and meetings have occurred between Edgewater Enterprises, LLC and the NJDEP regarding soil-delineation requirements.

Additionally, soil sampling results were provided to the NJDEP during the performance of the RI, including: a *Soil Remedial Investigation Report* (RIR), dated April 12, 2002 (DRAI, 2002j); a May 1, 2002 letter report detailing results of a test pit (TP-1) excavation (DRAI, 2002f); and a May 9, 2002 submittal providing updated figures of soil results, along with separate figures of arsenic and lead concentrations (DRAI, 2002g). A *Final Soil RIR*, which includes the results of all soil sampling conducted by TRC Raviv in the vicinity of the HCAA from March 22 to May 3, 2002, was submitted to NJDEP on July 29, 2002 (DRAI, 2002c).

In August 2003, EWMA submitted a report to the NJDEP summarizing field activities and soil sampling results from investigations in the Building 700 Area and to the south (EWMA, 2003). EWMA's sampling results supplemented TRC Raviv's database, resulting in the identification of two additional "hot spots" (Section 4.0) and further assisting in soil delineation.

### 2.2 Remedial Action Selection

A *Remedial Action Selection Report - Arsenic Area* (RASR) was prepared by DRAI in accordance with the TRSR (N.J.A.C. 7:26E-5.1), and submitted on May 1, 2002 (DRAI, 2002h). The RASR evaluated four remedial alternatives with respect to their ability to meet remedial objectives and pertinent remediation standards, estimated the extent and volume of the impacted soil, identified the objectives and standards used to guide the remedial action selection, screened potential technologies, and identified one remedial alternative that was retained for further evaluation.

The remedial alternative selected in the RASR for the arsenic contamination in soil is as follows:

- Interim Soil Remedial Action – Hot-spot removal of soil with arsenic concentrations greater than 1,000 ppm beneath the footprint of Building 400;

- Institutional Controls – Deed Notice restricting property usage; and
- Engineering Controls – Installation and maintenance of a cap over the HCAA.

The recommendations in the RASR are consistent with the ACO Amendment, which requires hot spot removal in the footprint of Building 400 (paragraph 9) and remediation of the HCAA in the form of a cap (paragraph 18). In an electronic mail (e-mail) correspondence dated July 9, 2002, Mr. Robert Hayton (NJDEP) verified that the cap was only required for the 1,000 ppm and greater area (i.e., the HCAA) (NJDEP, 2002e).

### **2.3 Interim Soil Remedial Action – Building 400 Area**

In accordance with the ACO Amendment and a NJDEP-approved Workplan dated June 21, 2002 (DRAI, 2002b), soils within the footprint of the planned Building 400 with arsenic concentrations greater than or equal to 1,000 ppm (Figure 2) were excavated on July 1 through 3, 2002 and disposed off-site. Post-excavation sampling was conducted to verify that all soils with arsenic concentrations over 1,000 ppm have been removed within the footprint of the building. In an e-mail dated July 11, 2002, Mr. Robert Hayton (NJDEP) approved the adequacy of hot spot removal in the Building 400 area, based on a review of post-excavation sampling data. A letter report summarizing the soil removal activities was submitted to the NJDEP on September 27, 2002 (DRAI, 2002i).

### **2.4 Ground Water Remedial Investigation**

In accordance with the ACO Amendment (NJDEP, 2002a), a Ground Water Remedial Investigation Workplan (RIW) was submitted to the NJDEP in June 2002. The NJDEP issued comments on the Groundwater RIW in a letter dated June 28, 2002 (NJDEP, 2002f). A revised Groundwater RIW was submitted in July 2002 (DRAI, 2002d), and additional comments were provided by the NJDEP in a letter dated September 27, 2002 (NJDEP, 2002g). A response letter addressing these issues was provided to the NJDEP on October 15, 2002 (DRAI, 2002k), and the NJDEP subsequently approved the Groundwater RIW on December 11, 2002 (NJDEP, 2002h).

The implementation of the Groundwater RIW was delayed by site construction activities. Field work has included: monitoring well installation (May to October, 2003), site-wide water level measurements and ground water sampling (November 2003 and February 2004), a tidal study (November 2003) and aquifer testing (February, 2004). A Groundwater Remedial Investigation Report (RIR) summarizing field activities and sampling results was submitted to NJDEP in July 2004.

### **2.5 Adjacent Quanta Site**

The Quanta Resources Superfund Site (Quanta site) is adjacent to the former Celotex site. Edgewater Enterprises entered into an Administrative Order on Consent (Order) with the USEPA on March 21, 2003 (USEPA, 2003a) for the construction of a cap and access roadway over an area of contamination on the Quanta site that is adjacent to the HCAA (Figure 2).

The cap on the Quanta site is a continuation of, and the design is consistent with, the cap that was constructed at the former Celotex site. The cap and access roadway at the Quanta site were constructed in accordance with the USEPA-approved June 3, 2003 *Cap and Access Roadway Workplan* (DRAI, 2003 and USEPA, 2003b).

### **3.0 SUMMARY OF SOIL REMEDIAL ACTION –HIGH CONCENTRATION ARSENIC AREA**

The ACO Amendment required remediation of arsenic-contaminated soils in the form of a cap (paragraph 18). In an electronic mail (e-mail) correspondence dated July 9, 2002, Mr. Robert Hayton (NJDEP) clarified that the cap was only required for the 1,000 ppm and greater area (i.e., the HCAA) (NJDEP, 2002e). A *Soil Remedial Action Workplan* (RAWP) was submitted for the HCAA on July 29, 2002 (DRAI, 2002a) with additional clarification on October 7, 2002 (DRAI, 2002l). The NJDEP approved the RAWP on October 30, 2002 (NJDEP, 2002b). Work at the Site began on October 31, 2002.

TRC Raviv supervised the installation of the geomembrane capping system for the HCAA and the adjacent Quanta site (see Section 2.5). Refer to Appendix B for photographs of construction activities. The site-wide capping system is being implemented by Edgewater Enterprises, and will be submitted under separate cover.

Construction commenced as described in the following sections.

#### **3.1 Limits of Capping System**

The HCAA was defined in the ACO Amendment (paragraph 10) as the “area within the 1,000 parts per million (ppm) arsenic contour line and the property boundaries.” The comprehensive soil delineation documented in the July 2002 Final Soil RIR served as the basis for the cap design. In 2003, EWMA conducted a coal tar investigation at the Celotex Site involving the collection of numerous soil borings and samples. Results indicated four soil borings contained arsenic concentrations above 1,000 ppm (Figure 2). With this data, the limits of the HCAA were expanded to the grid nodes as indicated in the August 26, 2003 *700 Building Coal Tar Remedial Investigation Report* (EWMA, 2003). Accordingly, TRC Raviv revised the original capping plan for the Site to include these soil boring locations within the cap area.

#### **3.2 Construction of Geomembrane Capping System**

Construction of the geomembrane capping system was completed by two contractors. All excavation work and earthwork preparation was completed by ROC Enterprises, Inc. (ROC), of Maywood, New Jersey. The deployment of geomembrane and geotextile, as well as the seaming of the synthetic materials, was completed by The Liner Company, Inc., of Colts Neck, New Jersey. TRC Raviv provided engineering oversight, while Health and Safety Monitoring was conducted by EWMA.

All surveying was completed by licensed site surveyors from McCutcheon Associates, P.A. (McCutcheon), of Secaucus, New Jersey. All surveys related to the geomembrane cap in the HCAA were completed under the direction and supervision of the TRC Raviv Field Engineer.

### 3.2.1 Subgrade Preparation

Construction of the HCAA subgrade began on October 31, 2002. The initial phase of subgrade design included the grading of existing materials present in the HCAA.

Upon arrival at the site, the Field Engineer determined that surficial conditions of the HCAA were not amenable to liner deployment. The existing in-place fill material appeared to be heterogeneous, containing construction/demolition (C&D) debris (concrete, rebar, brick, wood, etc.), and various size boulders in a loose soil matrix.

The area was rough-graded to a minimum 1% slope using a D8 and D3 bulldozer. The soils were then rolled with a vibrating drum roller. Upon inspection by the Field Engineer, the subgrade was still not amenable to liner deployment. It was determined that a layer of quarry process stone (QP) would be placed above the existing fill materials to provide a smooth subgrade for the liner system. This was a precautionary design change made in the field.

The HCAA was graded with a 6-inch lift of QP stone to a minimum 1% slope and then rolled with a vibrating drum roller. Slopes on the site were pitched in various directions with all flow paths leading off of the proposed capped area.

The Field Engineer completed inspection of the subgrade to ensure that the liner would not be compromised when placed on top of the compacted QP stone. The surveyor then took spot grades across the area to document the elevation at which the liner would be placed.

Figure 3 illustrates liner placement grades as surveyed by McCutcheon Associates, P.A.

#### 3.2.1.1 Utility Trench Excavation and Preparation

During the preparation of the subgrade, a utility trench was excavated for a storm sewer pipe (storm drainage line). The inclusion of storm water conveyance piping is specifically allowed in the ACO Amendment (paragraph 18), and was included in the RAWP. This trench runs in an east-west and north-south direction through the HCAA at an elevation of approximately 9 ft above mean sea level (msl). The trench was excavated with a Caterpillar 375 Track-Hoe. The position and elevation of the trench was set by the surveyor and then excavated. Soils were retained in the HCAA for site grading uses prior to capping.

Side slopes of the trench were set at approximately 1:1 and smoothed out with the bucket of a track-hoe. Two layers of thick (9 mil) plastic were used as a subgrade on the side slopes as an alternative to QP stone, since the stone would not stay on the side slopes. A 3 to 6-inch lift of QP stone was placed on the bottom of the trench as subgrade material, and compacted with a vibrating hand tamper. The geomembrane capping system discussed in Section 3.2.3 was then placed within and across the utility trench, on top of the prepared subgrade.

Figure 3 shows a cross section of the utility trench. Refer to Appendix A for the as-built location.

### 3.2.2 Anchor Trenching

An anchor trench was excavated around the perimeter of the HCAA on all sides except those bordering the Quanta site. This serves to secure the liner in-place and prevent or minimize the movement of the liner when subjected to overlying forces. The trench was dug to a depth of 1.5 to 2 ft and approximately 2 ft wide, and was backfilled with sand and/or re-use material once the capping system was laid in the trench. Figure 3 contains the detail for the anchor trench.

### 3.2.3 Materials

The following materials were used in the construction of the geomembrane capping system:

- a) Onsite Re-use Materials
- b) Thick White Plastic Sheeting
- c) Certified Clean Quarry Process Stone (QP)
- d) Certified Clean Sand
- e) Certified Clean Stone Dust
- f) 4 Ounce Non-woven Mirafi Brand Geotextile
- g) 30-mil SOLMAX Brand PVC Geomembrane

### 3.2.4 Placement

#### 3.2.4.1 Layers of Geomembrane Cap

The geomembrane capping system consists of three layers of synthetic material and one layer of natural material. The first through third layers (from bottom to top) are as follows: a 4 oz. Mirafi non-woven geotextile fabric; a 30 mil PVC geomembrane; and another layer of 4 oz. Mirafi non-woven geotextile. The fourth layer is a 1-foot lift of certified clean sand/stone dust, which acts as a barrier protection layer, preventing sharp materials from puncturing the geomembrane, and as a drainage layer which allows the flow of water off of the capping surface. The first layer of geotextile was placed directly on the prepared subgrade, as discussed in Section 3.2.1 (compacted QP stone) and Section 3.2.1.1 (compacted QP stone or 2 layers of plastic in the utility trench). Figure 3 illustrates the cap detail and cross sections for the HCAA.

#### Mirafi 4 oz. Non-Woven Geotextile

A 4 oz. weight, non-woven Mirafi brand geotextile was placed above and below the geomembrane layer (See Figure 3). The geotextile arrived onsite in rolls measuring 12.5 ft wide and 320 ft long. Beginning at one end of the area requiring lining, the rolls were hand rolled over the site side by side until the area was covered. The edges of the geotextile were overlapped by approximately 3 inches and then "heat tacked" together by the Liner Company, Inc. with a special melting tool. This method melted the geotextile fabrics together to form one large non-woven protective sheet.

In the area of the Utility Trench (storm sewer), a double lining of geotextile was laid out underneath the PVC geomembrane layer. This was done as a precautionary measure to ensure the geomembrane would not be compromised by the sidewalls of the utility trench.

#### 30-mil SOLMAX Poly-Vinyl Chloride (PVC) Geomembrane

A 30-mil thick, poly-vinyl chloride (PVC) SOLMAX brand geomembrane was placed between the two geotextile layers (See Figure 3). The PVC geomembrane arrived on large wooden pallets wrapped in a protective geotextile for transportation. For larger areas requiring liner, the geomembrane pallets were placed on top of the previously laid out geotextile and then unraveled lengthwise using a small track hoe excavator. Once the full length of the geomembrane was pulled out (approx. 350 ft), it was unfolded to its full width by hand (approx. 50 ft). The sheets were then welded together by the Liner Company, Inc. using a "mouse" or "wedge welder." An overlap of approximately 6 inches was required to seam two pieces of liner together forming a 1.5-inch wide solid weld. In areas where the wedge welder could not properly weld the seams together, a special adhesive was used to glue the seams. Both methods of seaming are accepted and certified by the manufacturer of the PVC geomembrane material.

Throughout the duration of cap construction, liner damage was kept to a minimum (less than five repairs). All repairs to the liner were conducted by The Liner Co. under the supervision of the Field Engineer. Repairs were made by cutting a piece of scrap PVC liner, placing it over the damaged area and then using the special bonding chemical to glue the PVC together and provide a water-tight seal over the hole/defect/damage.

All in-field testing of the liner welds passed. The infield testing was completed by a certified technician of The Liner Company, Inc. and supervised by the Field Engineer. One destruct sample was taken for every 400 ft of liner weld. This resulted in four samples that were sent to a certified lab for strength testing, where all destruct samples passed. Each destruct sample was cut out of the geomembrane after it was welded and placed over the area. The sample was approximately 3-ft long by 1-ft wide, with the welded seam running up the center of the sample. The resulting holes in the liner were closed and sealed using a geomembrane patch (large piece of PVC geomembrane), a special bonding chemical, and with a heat gun.

After completion of each phase of lining, a final inspection was completed by the Field Engineer to ensure that the integrity of the capping system was not compromised. The site surveyor then surveyed a final as-built topographic survey of the geomembrane liner. Figure 3 illustrates the surveyed contours for the liner system.

#### Barrier Protection Layer

The barrier protection layer consisted of 10 to 12 inches of certified clean sand or stone dust placed over the upper layer of geotextile. This material was pushed out onto the cap in a 2-foot lift forming a roadway over the liner. It was then spread out with the D3 bulldozer into a 10 to 12-inch lift over the entire cap. The barrier protection layer was utilized in the capping system to protect the liner from puncture from the overlying re-use material. This "re-use" material had a

small quantity of sharp objects that could have penetrated the protective geotextile without the barrier layer.

#### 3.2.4.2 Onsite Re-Use Material

Numerous excavations from around the site (outside the HCAA) have yielded a large quantity of soil. This soil was stored by Edgewater Enterprises in the eastern portion of the site for later use as fill material above the liner in portions of the capped HCAA. Upon completion of the barrier protection layer above the liner, this material was transported to the HCAA for construction of the access road off River Road. TRC Raviv supervised the placement of the first lift of onsite re-use material (approx. 2 ft thick) to ensure that the sub-contractor completed the proper screening of large rocks and sharp objects prior to placement on the barrier protection layer. The placement of the remaining onsite re-use material was completed by ROC Contractors, Inc. under the direction of Edgewater Enterprises.

#### 3.2.5 **Phases of Construction**

The construction of the geomembrane capping system for the HCAA on the Site was completed in five separate phases. Listed below are descriptions of each phase of cap construction for the Site. Figure 3 illustrates the location and area of each phase.

##### Phase I

The first and largest phase of cap construction covered approximately 16,000 square yards (sy) of surface area. This Phase utilized three pallets (50x300-ft each) of 30-mil PVC geomembrane and approximately 19 rolls (12x360-ft each) of 4 oz. Mirafi Geotextile. Anchor trenching was completed for half of the eastern, all of the western, and approximately 75% of the northern portion of the phased area. The liner was secured and then the trenches were backfilled. The remaining unsecured edges of liner were not covered with the barrier protection layer until the next phase was started. Approximately 95% of the storm sewer trench was lined with geotextile and geomembrane during this phase.

The portion of the liner that ran along the adjacent Quanta property was not anchored upon completion of this phase. This edge of liner was folded back approximately 8-ft on itself and left for future tie-in along the Quanta property (see Section 2.5). Work on this Phase began on October 31, 2002 and ended in February 2003.

##### Phase II

Phase II was a continuation of the northern and western portion of Phase I. These were long thin areas running along River Road, northward from the southern property boundary, approximately 130 ft long and 8 ft wide, and along the top of Phase I cap covering a 180-ft by 18-ft area. This portion of the cap covered approximately 475 sy of surface area. All seams of Phase II were welded to the edge of Phase I. Work in this area was started and completed on December 10, 2002.

### Phase III

Phase III of capping covered a triangular area to the north of Phase I along River Road. This phase covered approximately 650 sy of surface area. All seams were welded to the edges of the Phase I and Phase II areas. Work in this area was started and completed on January 9, 2003.

### Phase IV

Phase IV of the capping system included capping the area to the east of Phase I. Approximately 450 sy were capped, including the remainder of the east-west utility trench. Work in this area was started and completed on April 17, 2003.

### Phase V

Phase V of capping completed the geomembrane cap on the Site. This area had been expanded from the original Workplan to include new EWMA boring locations (see Section 3.1) that contained soils with arsenic concentrations above 1,000 ppm. Approximately 1,095 sy were capped and anchored. Work in this area was started and completed on June 23, 2003.

## **3.3 Construction of Asphalt/Concrete Cap and Site Restoration**

Placement of the onsite re-use material (after the first lift was completed) and construction of the asphalt and/or concrete portions of the cap in the HCAA was completed by ROC Contractors Inc. under the direction of Edgewater Enterprises. The existing conditions survey included in Appendix A was prepared in February 2004 by McCutcheon.

## **3.4 Deed Notice**

The RAWP specified the use of institutional controls in the form of a deed notice. A draft deed notice, which included the use of engineering controls for the HCAA, and had the property owner's written consent to its execution, was provided in the RAWP. However, the HCAA is only a small portion of the Site, and the property owner will incorporate this area into the site-wide deed-notice, the draft of which was submitted to the Department on May 7, 2004. The Deed Notice identifies and restricts all individual areas of concern at the Site where there are exceedances of the Department's non-residential direct contact soil cleanup criteria. The additional restrictions are specific to the use of engineering controls implemented where these exceedances occur.

#### **4.0 HOT SPOT EXCAVATIONS OUTSIDE THE HIGH CONCENTRATION ARSENIC AREA**

##### **4.1 Sample Location P-6**

On August 21, 2003, TRC Raviv completed excavation of a soil hot spot identified by EWMA at the location of soil boring P-6 (Figure 2) during RI activities (EWMA, 2003). The hot spot consisted of one sample, collected at boring P-6 at a depth of 8.75-9.25 ft bgs, in which arsenic was detected at a concentration of 9,370 ppm. This hot spot is surrounded by samples with arsenic concentrations less than 1,000 ppm, the site-specific remedial criterion. The hot spot was excavated following the procedures set forth in the NJDEP-approved June 21, 2002 *Arsenic Hot Spot Removal Workplan* that was prepared for a hot spot excavation in the Building 400 location (see Section 2.3).

A map showing the limits of the hot spot excavation and the post-excavation sample locations, and a table summarizing the analytical results, are included in Attachment 1. The complete QA/QC data package is being provided to NJDEP under separate cover.

A 12 ft by 12 ft area centered on boring P-6 was excavated to a depth of approximately 12 ft bgs. The first 6 ft of soil was stockpiled, on plastic, to the east of the excavation and sampled for arsenic, lead and PAHs. The next 6 ft of soils (6-12 ft bgs) were excavated and placed on plastic and sampled for waste classification parameters. Both soil piles were covered with plastic throughout the duration of laboratory analysis and disposal coordination.

A review of soils collected from the 0 to 6 ft bgs depth indicated results comparable to data observed during the RI and below the maximum concentrations for historic fill. These soils were used in backfilling the excavation, along with other soils to re-establish grade in the area.

The soils from 6 to 12-ft bgs depth were deemed to be hazardous for lead and required off-site disposal by Edgewater Enterprises. In October-November 2003 the lead-contaminated soil was removed from the site by Clean Harbors, Inc. and disposed at an approved facility. Manifests associated with removal and disposal of these soils are provided in Attachment 1.

##### **4.2 Sample Location P-7**

On January 23, 2004, TRC Raviv completed excavation of a soil hot spot identified by EWMA at the location of soil boring P-7 (Figure 2) during RI activities (EWMA, 2003). The hot spot consisted of one sample, collected at boring P-7 at a depth of 7.5-8.0 ft bgs, in which lead was detected at a concentration of 12,000 ppm. The historical fill data table in the NJDEP's TRSR cites maximum lead concentrations of 10,000 ppm, and this has been used as a site-specific remedial criterion. This hot spot is surrounded by samples with lead concentrations less than 10,000 ppm. As with sample location P-6 (Section 4.1), the hot spot was excavated in accordance with the procedures set forth in the NJDEP-approved June 21, 2002 *Arsenic Hot Spot Removal Workplan* (see Section 2.3).

A map showing the limits of the hot spot excavation and the post-excavation sample locations, and a table summarizing the analytical results, are included in Attachment 2. The complete QA/QC data package is being provided to the NJDEP under separate cover.

A 12 ft by 12 ft area centered on boring P-7 was excavated to a depth of approximately 12 ft bgs. The first 5 ft of soil was stockpiled and sampled for arsenic, lead and PAHs. The next 7 ft of soils (5-12 ft bgs) were excavated, stockpiled, on plastic, and sampled for waste classification parameters. Both soil piles were covered with plastic throughout the duration of laboratory analysis and disposal coordination.

A review of soils collected from the 0 to 5 ft bgs depth indicated results comparable to data observed during the RI and below the maximum concentrations for historic fill. These soils were used in backfilling the excavation, along with other soils to re-establish grade in the area.

The soils from 5 to 12 ft bgs depth were deemed to be hazardous for lead. These soils will be disposed in the near future similar to the soils from Sample Location P-6.

## **5.0 MONITORING, MAINTENANCE, AND REPORTING**

The following is an outline of Edgewater Enterprises, LLC responsibilities for capping system inspections, operation and maintenance (O&M), and reporting in accordance with the TRSR, N.J.A.C. 7:26E-6.4 (Post Remedial Action Requirements), which will be set forth in the Deed Notice for the Site.

At a minimum, the procedures for the O&M of the cap will be as follows:

- Cap inspection periodically to determine its integrity, operability and effectiveness;
- Repairs will be made as necessary so that the cap remains protective of the public health and environment;
- Site inspection periodically to ensure land use is in accordance with the deed notice; and
- In accordance with the site-wide deed notice to be executed by Edgewater Enterprises, LLC, biennial certification(s) will be submitted to NJDEP 2 years from the date of the Department's written No Further Action (NFA) letter for the HCAA, and every 2 years thereafter (including an electronic copy) certifying compliance with the above.

## 6.0 REFERENCES CITED

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- DRAI, 2002b, *Arsenic Hot Spot Removal Workplan*, Former Celotex Industrial Park, Edgewater, NJ, June 21, 2002.
- DRAI, 2002c, *Final Soil Remedial Investigation Report – Arsenic Area*, Former Celotex Industrial Park, Edgewater, NJ, July 29, 2002.
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- DRAI, 2002g, *Letter to Robert Hayton, NJDEP re: Updated Figures of Soil Results*, May 9, 2002.
- DRAI, 2002h, *Remedial Action Selection Report – Arsenic Area*, Former Celotex Industrial Park, Edgewater, NJ, May 21, 2002.
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- DRAI, 2002k, *Response to New Jersey Department of Environmental Protection (NJDEP) Comments – Ground Water Remedial Investigation Workplan*, Former Celotex Industrial Park, Edgewater, NJ, October 15, 2002.
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- DRAI, 2003, *Revised Cap and Access Roadway Workplan*, Celotex Industrial Park Easement, Quanta Resources Superfund Site, Edgewater, NJ, June 3, 2003.
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- NJDEP, *Technical Requirements for Site Remediation*, N.J.A.C. 7:26E, *et seq.*

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NJDEP, 2002f, NJDEP Comments on June 2002 *Ground Water Remedial Investigation Workplan*, June 28, 2002.

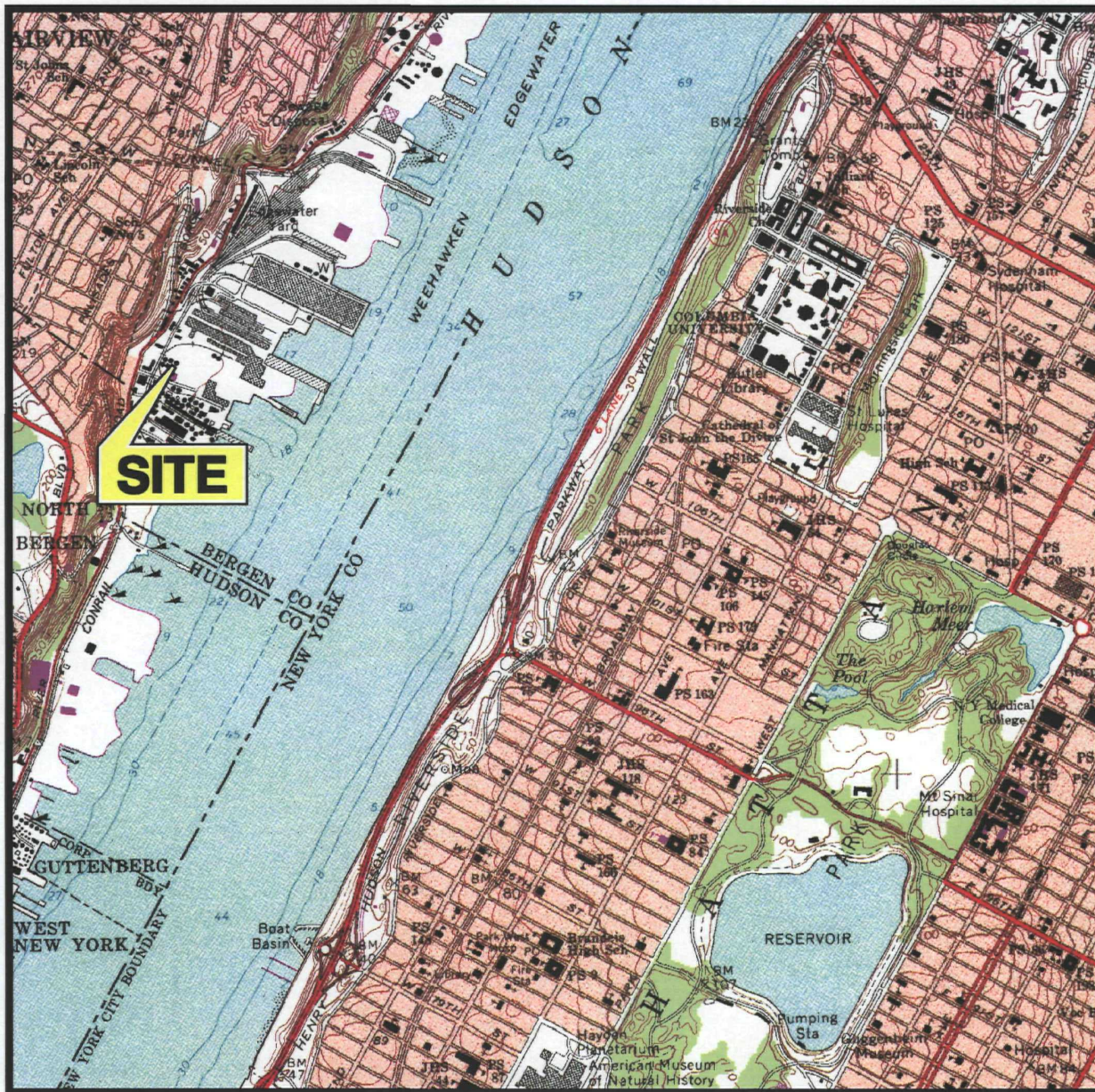
NJDEP, 2002g, NJDEP Comments on July 2002 *Revised Ground Water Remedial Investigation Workplan*, September 27, 2002.

NJDEP, 2002h, NJDEP Approval of July 2002 *Revised Ground Water Remedial Investigation Workplan*, December 11, 2002.

USEPA, 2003a, *Administrative Order on Consent*. Index No. CERCLA 02-2003-2014, March 21, 2003.

USEPA 2003b, Approval of June 3, 2003 *Revised Cap and Access Roadway Workplan*, Celotex Industrial Park Easement, Quanta Resources Superfund Site.

## FIGURES

CENTRAL PARK QUADRANGLE, N.Y.-N.J.

1966

PHOTOREVISED 1979

7.5 MINUTE SERIES (Topographic)

0 2000 FT.  
APPROXIMATE SCALE



**TRC Raviv Associates, Inc.**

57 E. Willow Street Millburn, NJ 07041

#### SITE LOCATION

Former Celotex Industrial Park — Edgewater, NJ

PREPARED BY: RKH/ODL

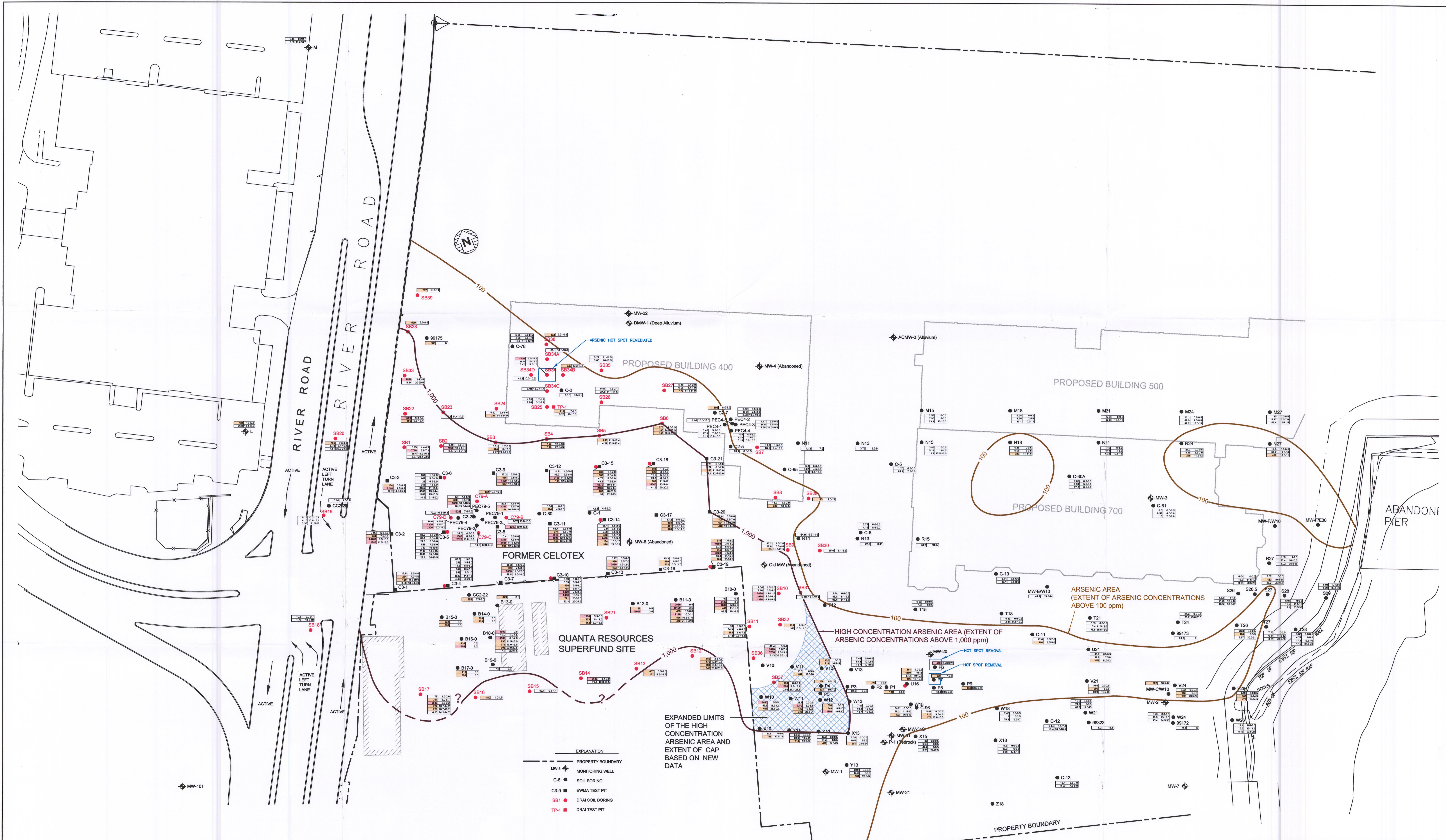
DATE: MAY 2004

JOB NO.: 01C2084

FIGURE: 1

2084SLM -07/28/04

305086



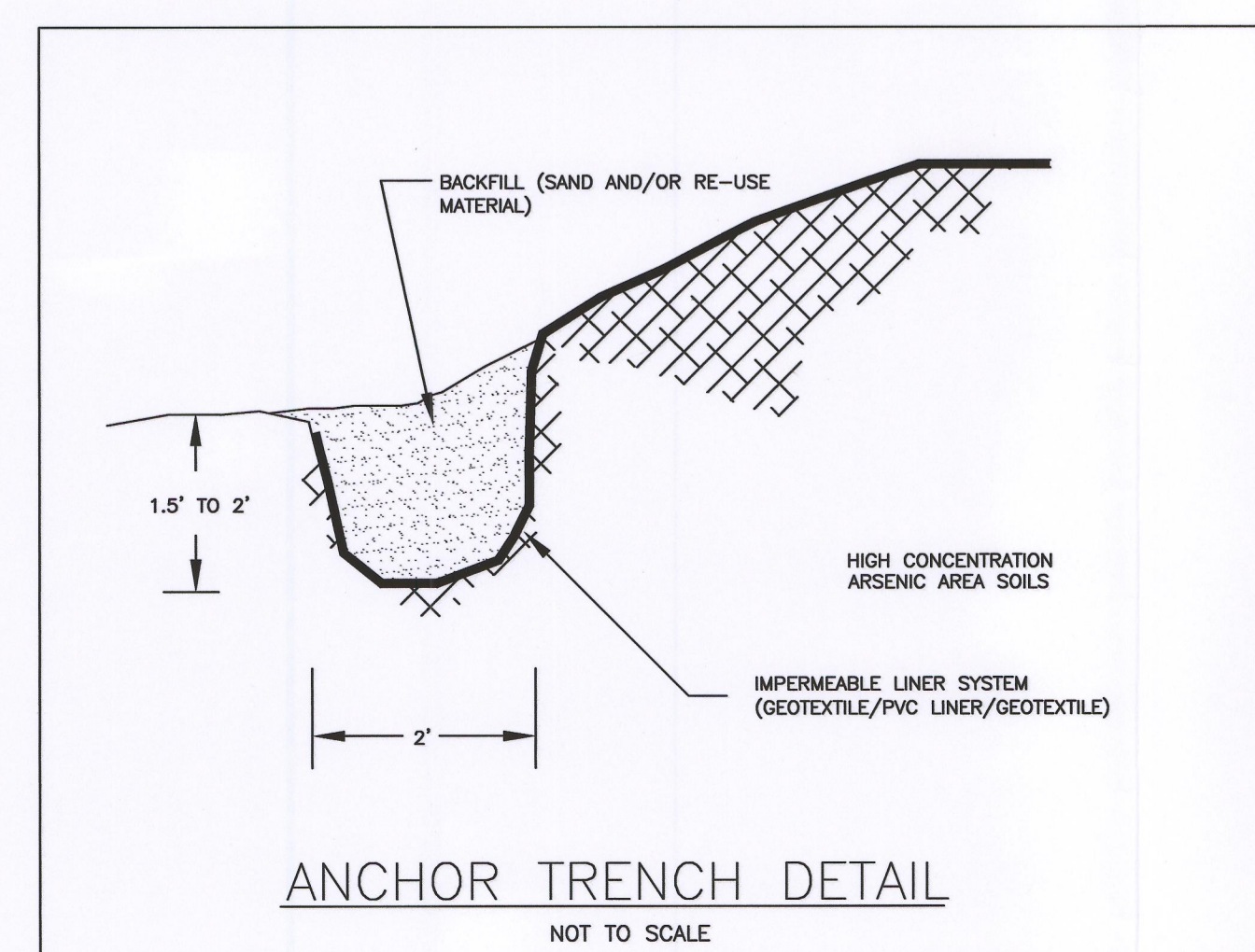
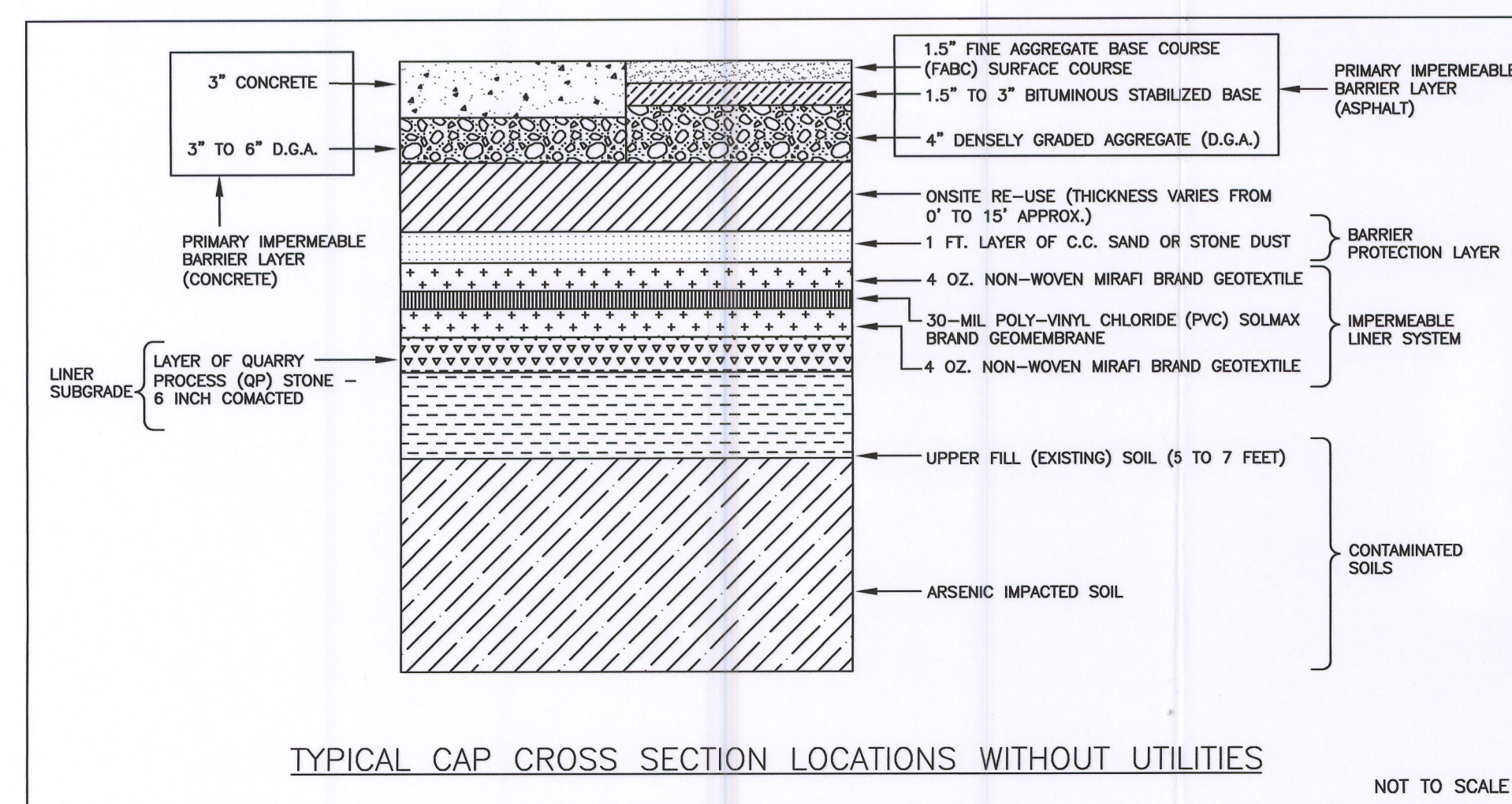
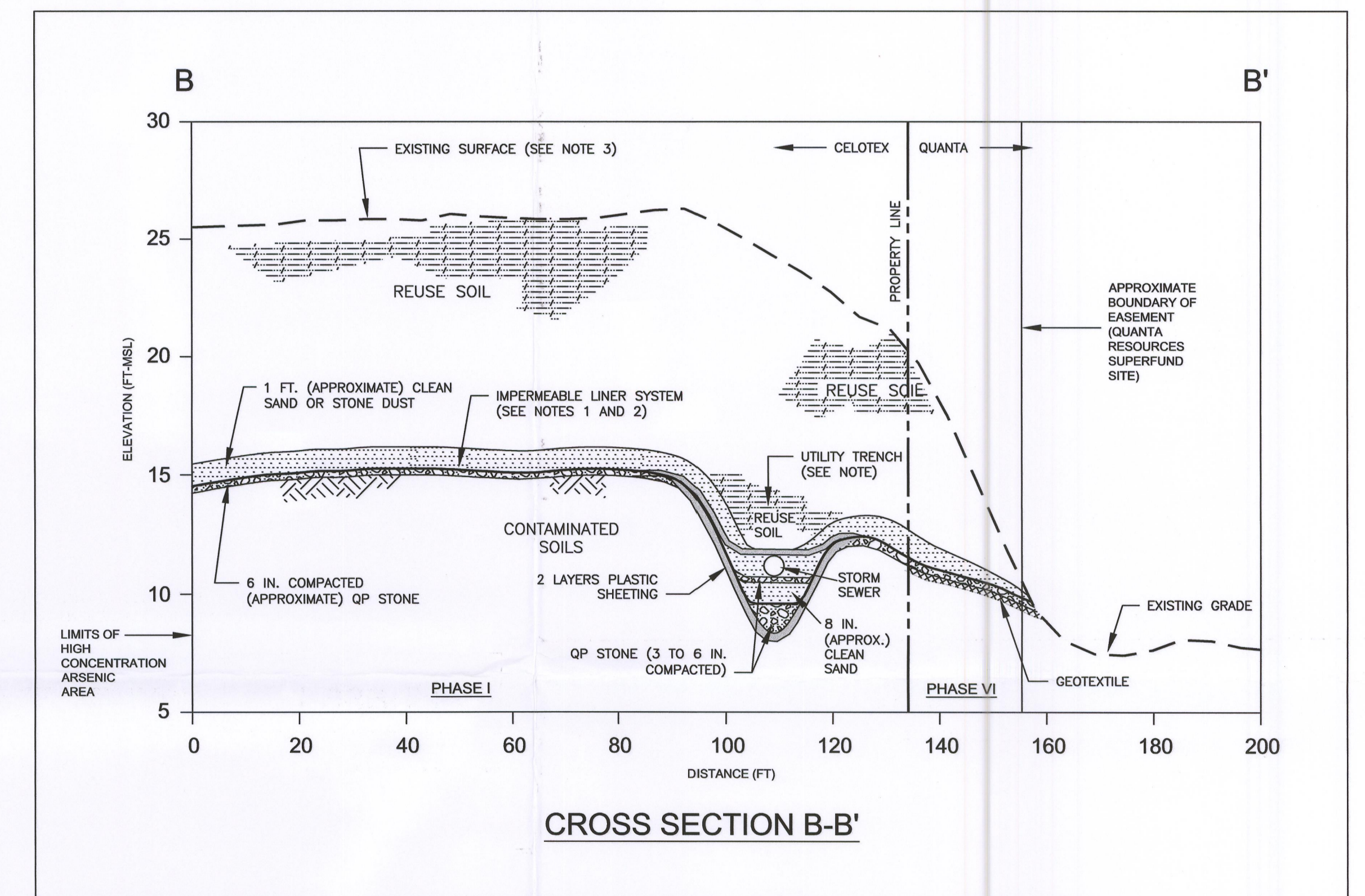
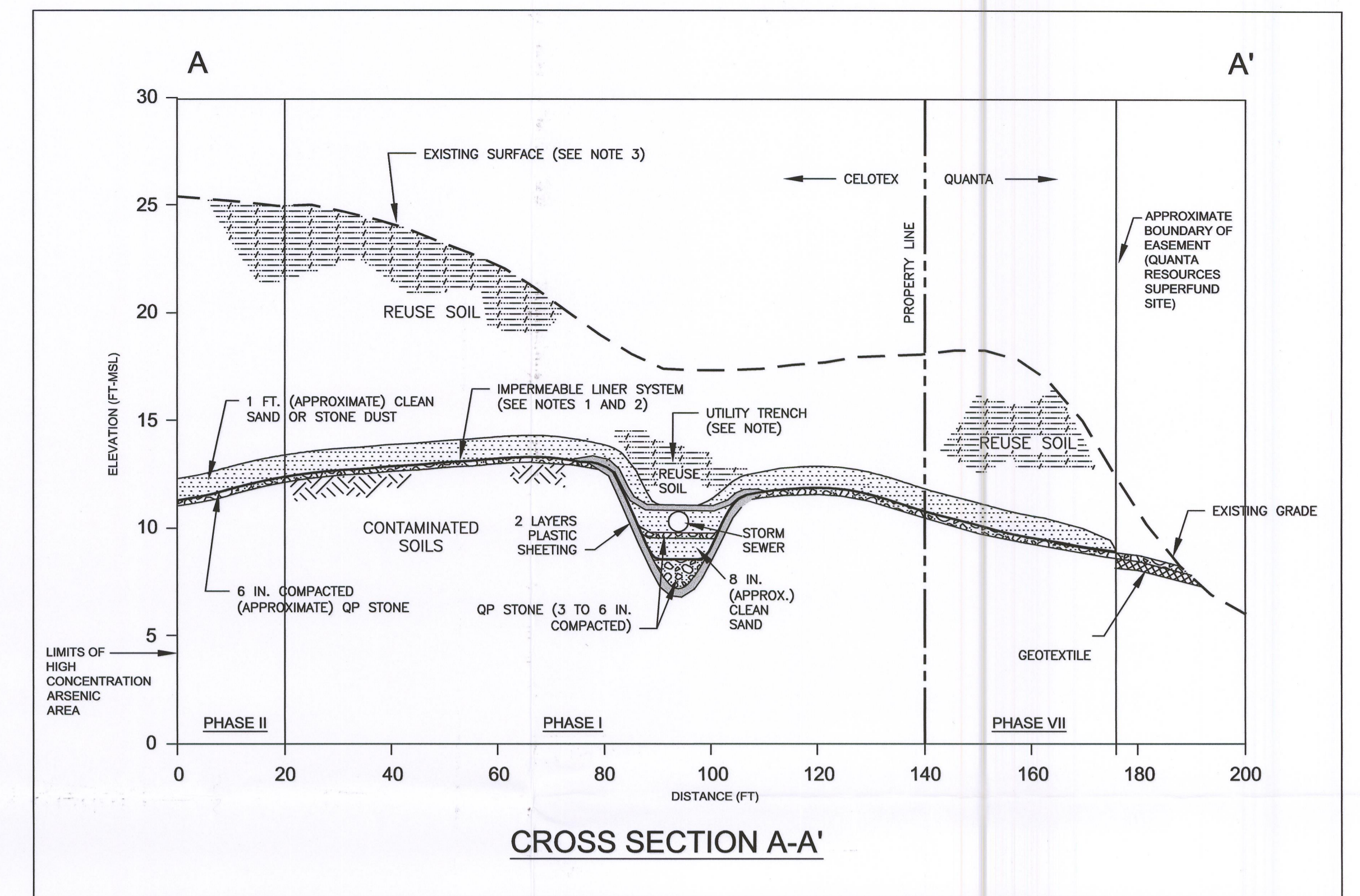
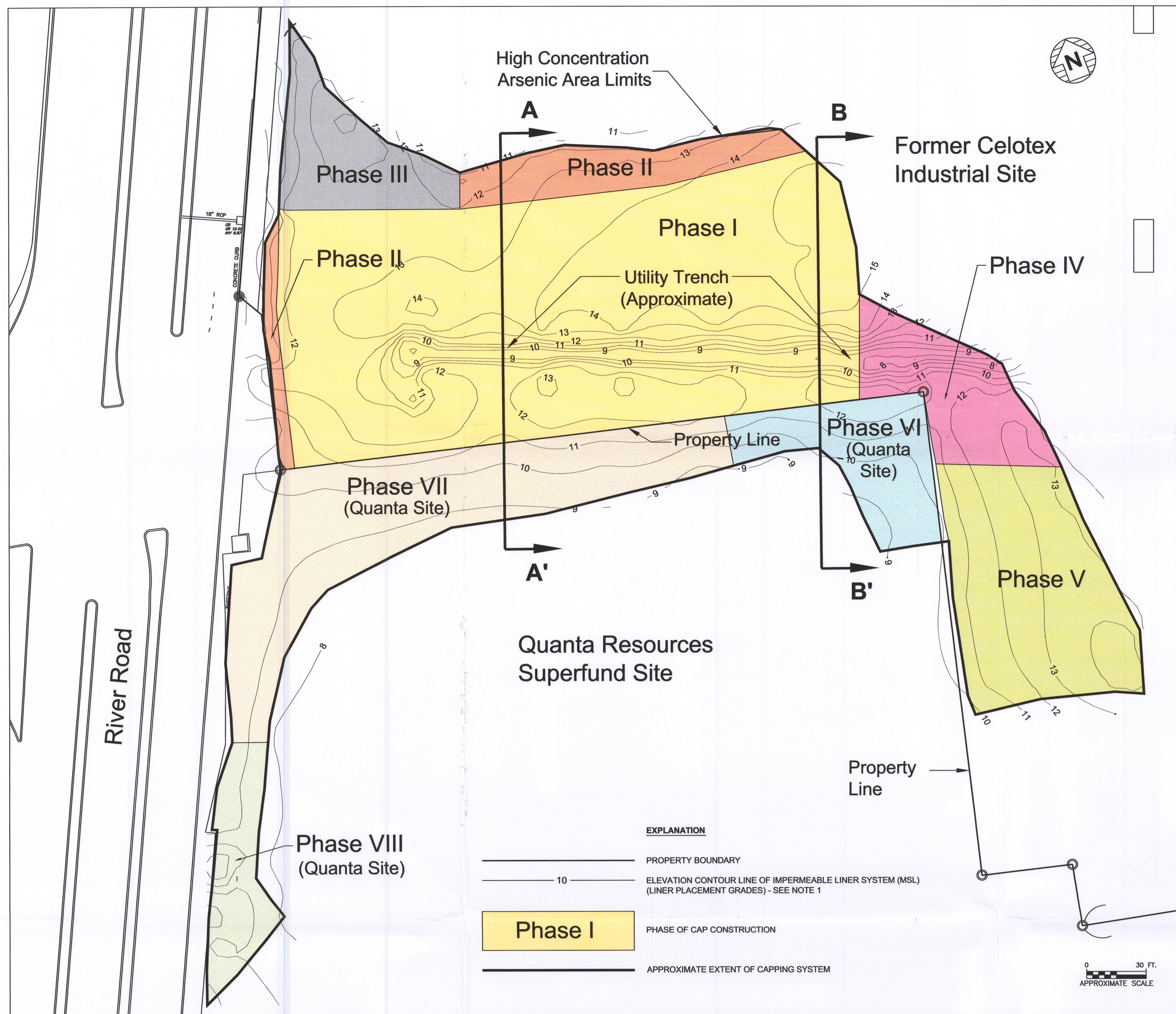
**TRC Raviv Associates, Inc.**  
57 E. Willow Street Millburn, NJ 07041

ARSENIC CONCENTRATIONS IN SOIL  
HIGH CONCENTRATION ARSENIC AREA  
AND SITE-WIDE

Former Celotex Industrial Park - Edgewater, NJ

PREPARED BY: PG/LB      DATE: JULY 2004

JOB NO.: 01C2084      FIGURE: 2



#### NOTES:

- (1) LINER PLACEMENT GRADES ARE FROM McCUTCHEON ASSOCIATES, P.A., SURVEY DRAWING ENTITLED, "ARSENIC BARRIER LINER SPOT GRADES" DATED 11/15/02.
- (2) IMPERMEABLE LINER SYSTEM INCLUDES 4oz. NON WOVEN GEOTEXTILE, 30 mil PVC GEOMEMBRANE, AND 4oz. NON WOVEN GEOTEXTILE.
- (3) EXISTING SURFACE GRADES ARE FROM McCUTCHEON ASSOCIATES, P.A. SURVEY DRAWING ENTITLED, "EXISTING CONDITIONS SURVEY" DATED 2/27/04 AND INCLUDED IN APPENDIX A. REFER TO THE DRAWING FOR INFORMATION REGARDING THE FINAL SITE PLAN AND ASPHALT/CONCRETE CAP.

**TRC Raviv Associates, Inc.**  
57 E. Willow Street Millburn, NJ 07041

**PHASES OF CAP CONSTRUCTION AND CAP CROSS SECTIONS**

EDGEWATER ENTERPRISES, LLC  
PREPARED BY: SW/LB DATE: APRIL 2004  
JOB NO.: 01C2084 FIGURE: 3

## APPENDICES

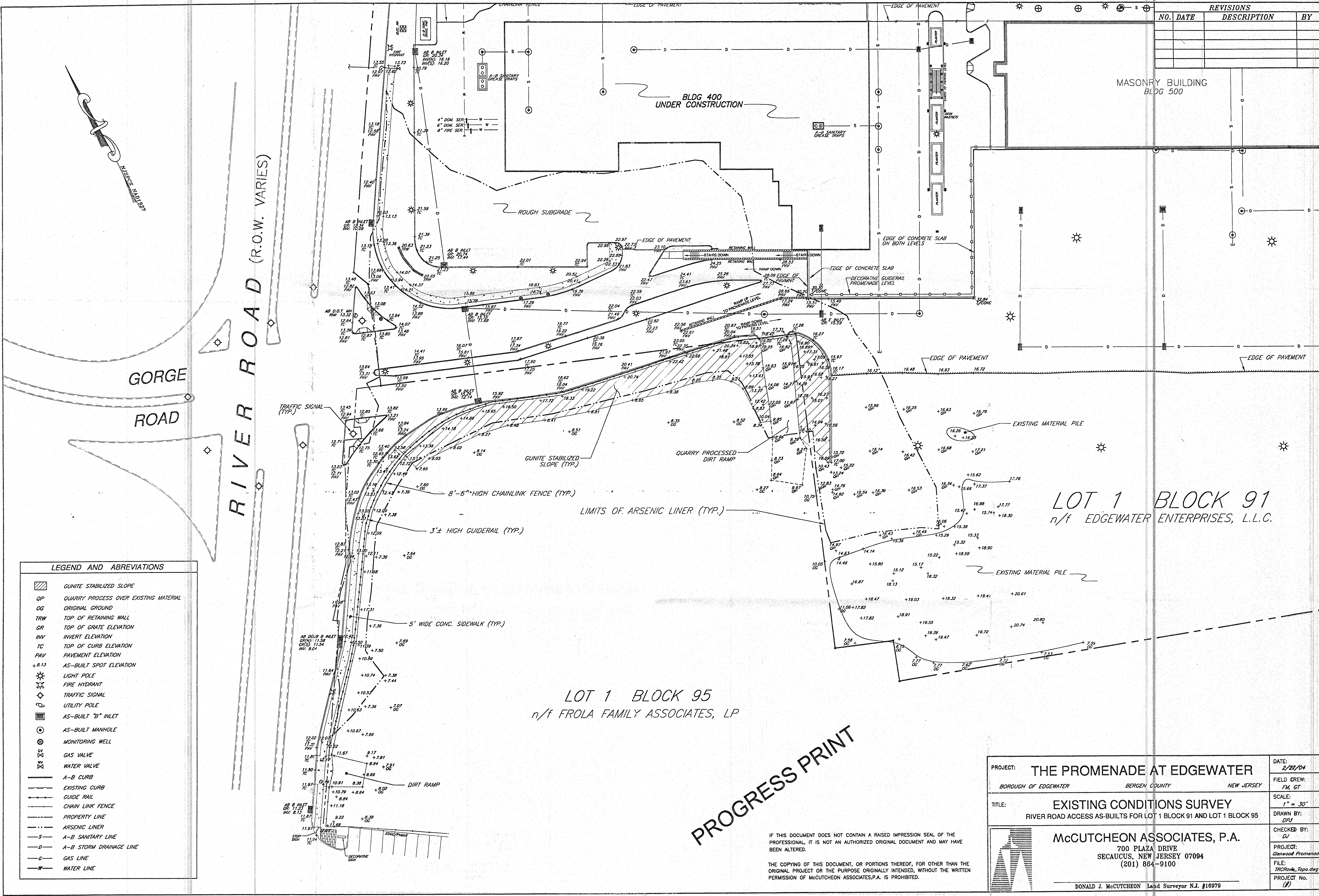

## APPENDIX A

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## **APPENDIX A**

As-Built Design Drawings

REVISIONS			
NO.	DATE	DESCRIPTION	BY



LEGEND AND ABBREVIATIONS	
	GUNITE STABILIZED SLOPE
	QUARRY PROCESS OVER EXISTING MATERIAL
	ORIGINAL GROUND
	TOP OF RETAINING WALL
	TOP OF GRATE ELEVATION
	INVERT ELEVATION
	TOP OF CURB ELEVATION
	PAVEMENT ELEVATION
	AS-BUILT SPOT ELEVATION
	LIGHT POLE
	FIRE HYDRANT
	TRAFFIC SIGNAL
	UTILITY POLE
	AS-BUILT "B" INLET
	AS-BUILT MANHOLE
	MONITORING WELL
	GAS VALVE
	WATER VALVE
	A-B CURB
	EXISTING CURB
	GUIDE RAIL
	CHAIN LINK FENCE
	PROPERTY LINE
	ARSONIC LINER
	A-B SANITARY LINE
	A-B STORM DRAINAGE LINE
	GAS LINE
	WATER LINE

PROGRESS PRINT

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THE COPYING OF THIS DOCUMENT, OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF McCUTCHEON ASSOCIATES, P.A. IS PROHIBITED.

PROJECT: THE PROMENADE AT EDGEWATER			DATE: 2/27/04
BOROUGH OF EDGEWATER	BERGEN COUNTY	NEW JERSEY	FIELD CREW: FM, GT
TITLE: EXISTING CONDITIONS SURVEY			SCALE: 1" = 30'
RIVER ROAD ACCESS AS-BUILTS FOR LOT 1 BLOCK 91 AND LOT 1 BLOCK 95			DRAWN BY: DPJ
McCUTCHEON ASSOCIATES, P.A.			CHECKED BY: DJ
700 PLAZA DRIVE			PROJECT: Glenwood Promenade
SECAUCUS, NEW JERSEY 07094			FILE: TRCPlan_Topo.dwg
(201) 864-9100			PROJECT NO. (1)
DONALD J. McCUTCHEON Land Surveyor N.J. #16979			

## **APPENDIX B**

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**APPENDIX B**

Construction Photographs



Figure 1: Preparation of subgrade looking westerly towards River Road.



Figure 2: Placement of geomembrane (PVC Liner) over geotextile.

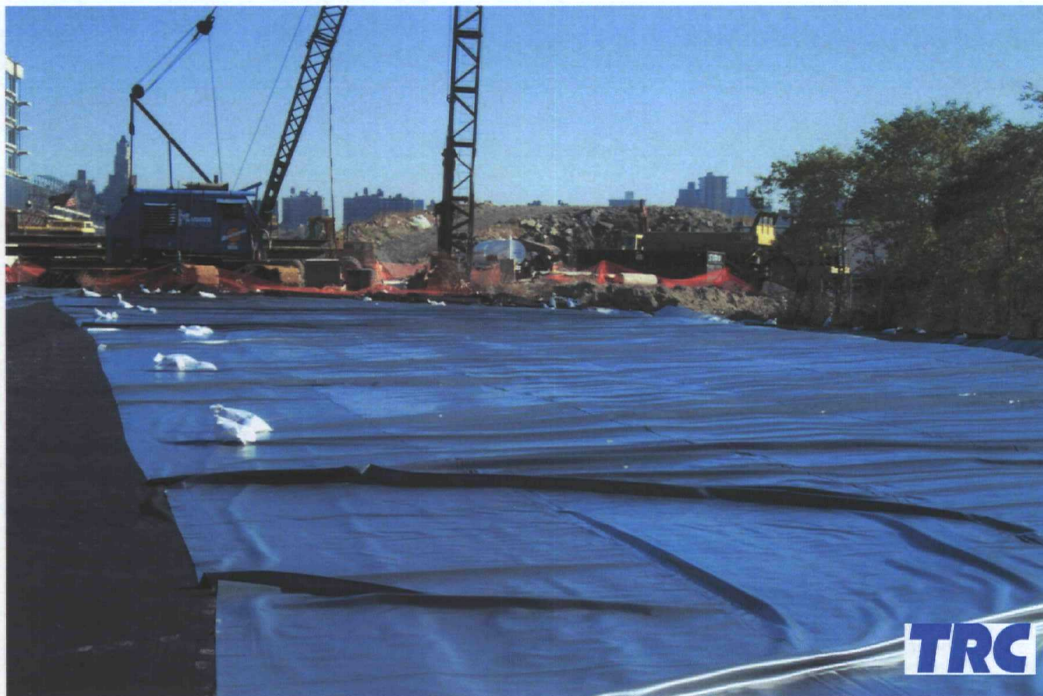


Figure 3: PVC geomembrane liner.

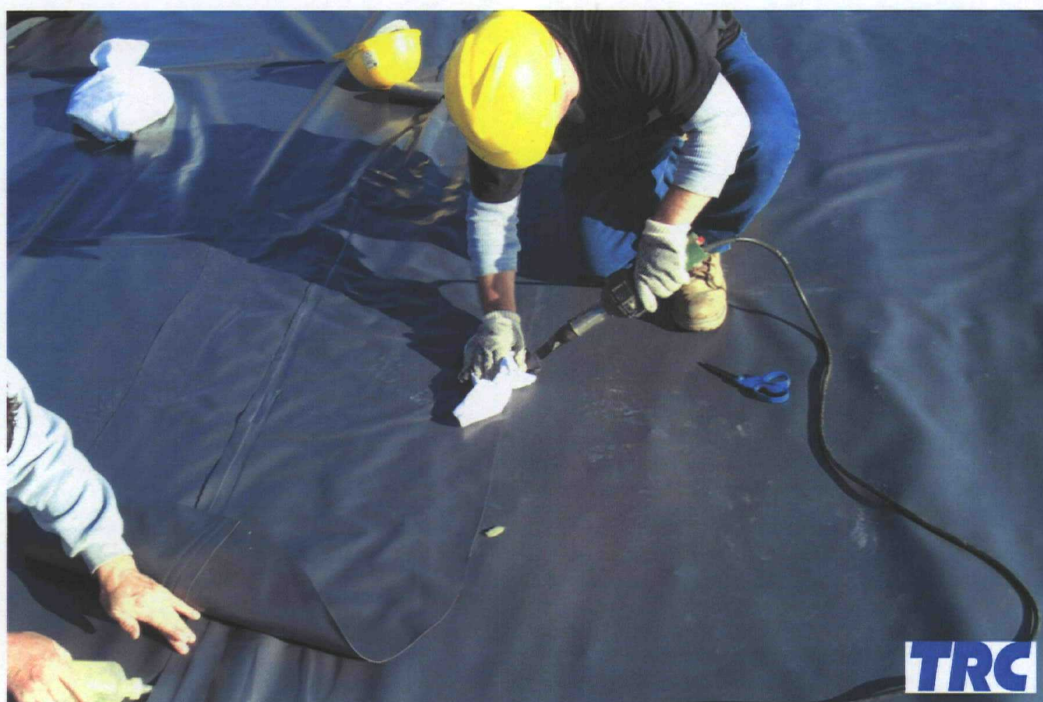


Figure 4: Seaming of PVC geomembrane liner.



Figure 5: Destruct sample – PVC liner seam.



Figure 6: Utility trench looking westerly towards River Road.



Figure 7: Utility trench looking easterly.



Figure 8: Placement of barrier protection layer above liner.



Figure 9: Placement of storm sewer line in utility trench.

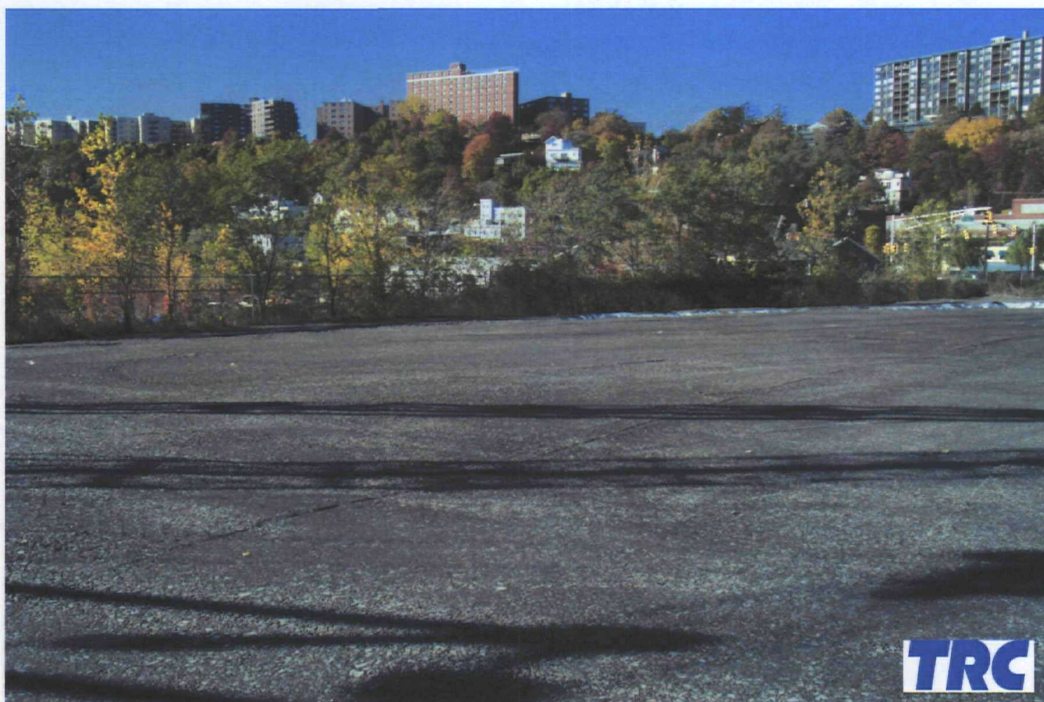


Figure 10: Completed section of asphalt cap.

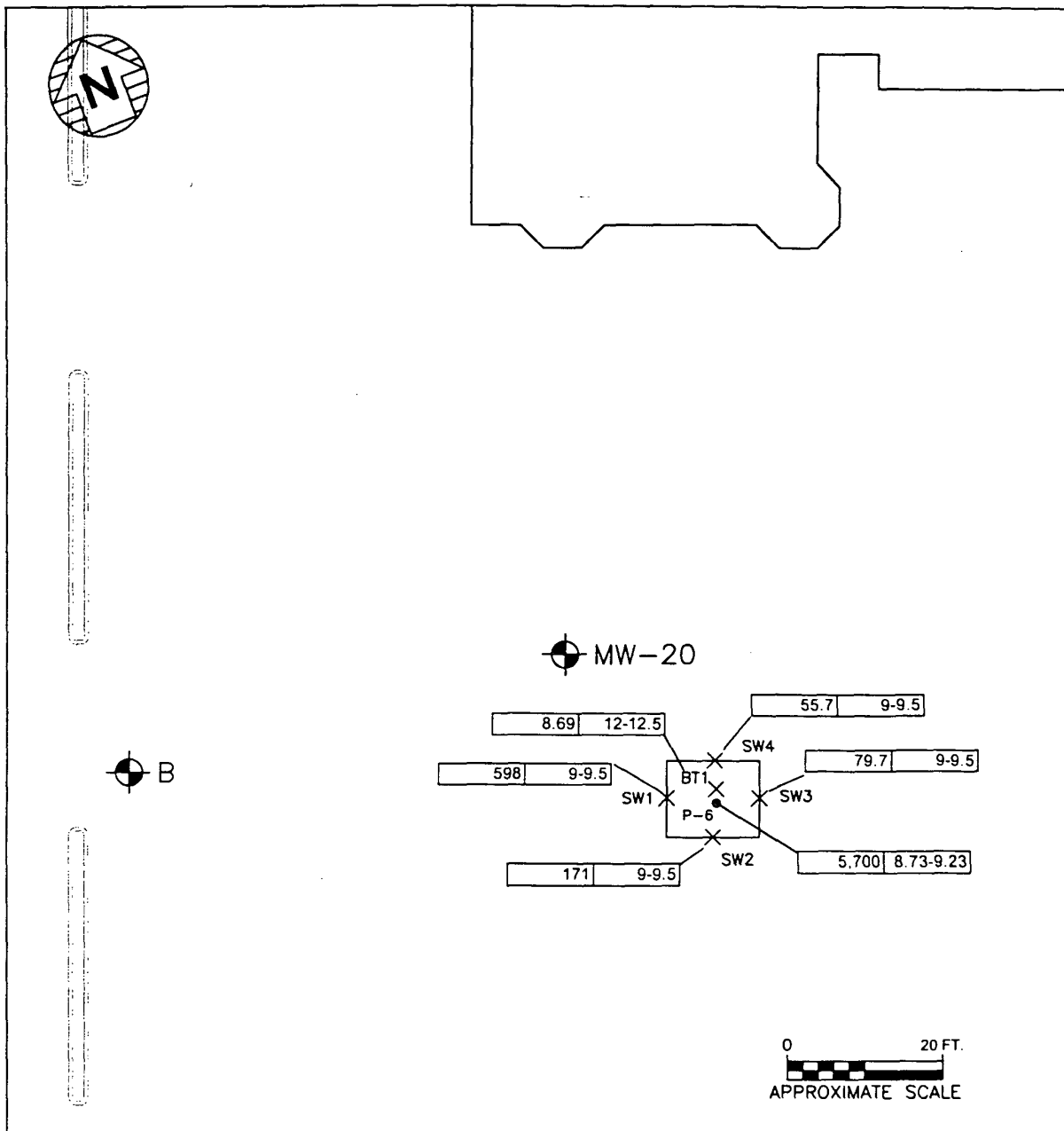
**ATTACHMENTS**


**ATTACHMENT 1**

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**ATTACHMENT 1**

Hot Spot Removal – Sample Location P-6



#### EXPLANATION

- MW-20 EXISTING MONITORING WELL  
P-6 SOIL BORING LOCATION  
SW1 POST-EXCAVATION SAMPLE LOCATION

598	9-9.5	Depth (ft)
		As Concentration (ppm)

#### Notes:

- 1) As = arsenic
- 2) ppm = parts per million

### TRC Raviv Associates, Inc.

57 E. Willow Street Millburn, NJ 07041

#### ARSENIC HOT SPOT EXCAVATION POST-EXCAVATION SAMPLE RESULTS

Former Celotex Industrial Park - Edgewater, NJ

PREPARED BY: MG/LB

DATE: JANUARY 2004

JOB NO.: 01C2084

FIGURE: 1

2084-50 -03/31/04

305103

File I  
**Arsenic Hot Spot Excavation at P-6**  
**Post-Excavation Sample Results**  
**Celotex - Edgewater, New Jersey**

Client ID:	SW1	SW2	SW3	SW4	BT1
Sample Depth:	9-9.5	9-9.5	9-9.5	9-9.5	12-12.5
Lab ID:	07316-001	07316-002	07316-003	07316-004	07316-005
Date Sampled:	8/21/2003	8/21/2003	8/21/2003	8/21/2003	8/21/2003

Metals (ppm)	USCC	RSCC					
Arsenic	20	100*	598	171	79.7	55.7	8.69

\* = site specific delineation criterion

# MARYLAND DEPARTMENT OF THE ENVIRONMENT

Montgomery Park, 1800 Washington Boulevard, Suite 650, Baltimore, Maryland 21230-1719  
(410) 631-3344 1-800-633-6101 (within Maryland) <http://www.mde.state.md.us>

## HAZARDOUS WASTE PROGRAM

## HAZARDOUS WASTE MANIFEST

Form Approved. OMB No. 2050-0039.

Please print or type. (Form designed for use on elite (12 pin) typewriter.)

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. M 1 1 0 9 8 1 8 7 6 6 4 2		Manifest Document No. 1190171		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.																																											
3. Generator's Name and Mailing Address Edgewater Enterprises 1 River Road Edgewater, NJ 07020-0000						A. State Manifest Document Number MDC 1068071																																													
4. Generator's Phone (201) 945-9555						B. State Generator's ID SAME																																													
5. Transporter 1 Company Name Clean Harbors Env Services Inc						C. State Transporter's ID HWH 11111111 DC 111111																																													
6. US EPA ID Number M 1 1 0 9 8 1 8 7 6 6 4 2						D. Transporter's Phone 761-840-1800																																													
7. Transporter 2 Company Name HORN WITH TRK INC						E. State Transporter's ID 000000																																													
8. US EPA ID Number M 1 1 0 9 8 1 8 7 6 6 4 2						F. Transporter's Phone 781-840-1800																																													
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10. US EPA ID Number M 1 1 0 9 8 1 8 7 6 6 4 2						H. Facility's Phone 410-244-8200																																													
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) Hazardous waste, solid, n.o.s., (Lead), 9. NA3077, PG III, 9. NA3077, III						12. Containers No. Type		13. Total Quantity EST		14. Unit Wt/Vol		15. Waste No. D008																																							
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J. Additional Descriptions for Materials Listed Above						K. Handling Codes for Wastes Listed Above																																													
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15. Special Handling Instructions and Additional Information 1a CH49699																																																			
<p align="center">IN EMERGENCY, CALL CHEM 1-800-645-8265 NJ Dep D7259 Decal 087530 WO MS683451</p>																																																			
16. GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and Maryland Statutes or Regulation. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.																																																			
Printed/Typed Name Richard LaBrecque						Signature <i>[Signature]</i>																																													
Month Day Year 11/01/03																																																			
17. Transporter 1 Acknowledgement of Receipt of Materials						Date																																													
Printed/Typed Name Bryan Lynch						Signature <i>[Signature]</i>																																													
Month Day Year 11/01/03																																																			
18. Transporter 2 Acknowledgement of Receipt of Materials						Date																																													
Printed/Typed Name JERRY L. ANDREWS						Signature <i>[Signature]</i>																																													
Month Day Year 11/02/03																																																			
19. Discrepancy Indication Space																																																			
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.																																																			
Printed/Typed Name Margeline Wright						Signature <i>[Signature]</i>																																													
Month Day Year 11/02/03																																																			

In case of an emergency or spill, immediately call the National Response Center at (800) 424-9302 and the MDE at (410) 631-3400. Nights and Holidays at (410) 974-3344.

# MARYLAND DEPARTMENT OF THE ENVIRONMENT

Montgomery Park, 1800 Washington Boulevard, Suite 650, Baltimore, Maryland 21230-1719

(410) 631-3344 1-800-633-6101 (within Maryland) <http://www.mde.state.md.us>

## HAZARDOUS WASTE PROGRAM

### HAZARDOUS WASTE MANIFEST

Form Approved. OMB No. 2050-0039.

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				H. Facility's Phone 410 244-8200																																							
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. Hazardous waste, solid, n.o.s., (Lead), 9, NA3077, PG III, 9, NA3077, III				12. Containers No. Type 001 CM 0015 y		13. Total Quantity EST																																					
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15. Special Handling Instructions and Additional Information 11a CH19599 IN EMERGENCY, CALL CHES 1-800-645-8265 WJH A304-25 NJ Dep 07259 Decal 03-7537 088643 MS683451																																											
16. GENERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and Maryland Statutes or Regulation. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.																																											
Printed/Typed Name Richardson				Signature Richardson																																							
Month Day Year 11/02/10																																											
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Bryan Lynch				Signature Bryan Lynch																																							
Month Day Year 11/02/10																																											
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature																																							
Month Day Year																																											
19. Discrepancy Indication Space																																											
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 18.																																											
Printed/Typed Name Susan Richardson				Signature Susan Richardson																																							
Month Day Year 11/11/10																																											

In case of an emergency or spill, immediately call the National Response Center at (800) 424-9300 and the MDE at (410) 631-3400. Nights and Holidays at (410) 974-3344.

21.08901

# MARYLAND DEPARTMENT OF THE ENVIRONMENT

Montgomery Park, 1800 Washington Boulevard, Suite 650, Baltimore, Maryland 21230-1719  
(410) 631-3344 1-800-633-6101 (within Maryland) <http://www.mde.state.md.us>

## HAZARDOUS WASTE PROGRAM

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) HAZARDOUS WASTE MANIFEST Form Approved. OMB No. 2050-0038.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. NJ0981876642		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.																																									
3. Generator's Name and Mailing Address Edgewater Enterprises 1 River Road Edgewater, NJ 07020-0000				A. State Manifest Document Number MDC 1068073																																											
4. Generator's Phone (201) 945-9555				B. State Generator's ID SAME																																											
5. Transporter 1 Company Name Clean Harbors Env Services Inc		6. US EPA ID Number MA03932250		C. State Transporter's ID HWH 160 000002		D. Transporter's Phone 781 849-1800																																									
7. Transporter 2 Company Name Clean Harbors Env Services Inc		8. US EPA ID Number MA03932250		E. State Transporter's ID HWH 160 000002		F. Transporter's Phone 781 849-1800																																									
9. Designated Facility Name and Site Address Clean Harbors Of Baltimore Inc 1910 Russell Street Baltimore, MD 21230-0000				10. US EPA ID Number MD0980555189		G. State Facility ID A-151																																									
				H. Facility's Phone 410 244-8200																																											
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) Hazardous waste, solid, n.o.s., (Lead), 9, NA3077, PG III, 9, NA3077, III				12. Containers No. Type XXI CMXXI 15 Y		13. Total Quantity BT																																									
				14. Unit Wt/Vol		15. Waste No. D008																																									
J. Additional Descriptions for Materials Listed Above				K. Handling Codes for Wastes Listed Above																																											
<table border="1"> <tr> <th>Haz. Code</th> <th>Physical State</th> <th>Specific Gravity</th> <th>Percentage</th> <th>Haz. Code</th> <th>Physical State</th> <th>Specific Gravity</th> <th>Percentage</th> </tr> <tr> <td>a. E</td> <td>SL</td> <td></td> <td>100</td> <td>c.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>b.</td> <td></td> <td></td> <td></td> <td>d.</td> <td></td> <td></td> <td></td> </tr> </table>				Haz. Code	Physical State	Specific Gravity	Percentage	Haz. Code	Physical State	Specific Gravity	Percentage	a. E	SL		100	c.				b.				d.				<table border="1"> <tr> <td>a.</td> <td></td> <td></td> <td></td> <td>c.</td> <td></td> <td></td> <td></td> </tr> <tr> <td>b.</td> <td></td> <td></td> <td></td> <td>d.</td> <td></td> <td></td> <td></td> </tr> </table>				a.				c.				b.				d.			
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Printed/Typed Name X KENNARD L. PARRISH				Signature [Signature]		Month Day Year 11/10/03																																									
17. Transporter 1 Acknowledgement of Receipt of Materials				Signature Ronald F. Emm		Month Day Year 11/10/03																																									
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature Ronald F. Emm		Month Day Year 11/10/03																																									
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Printed/Typed Name Robert O. McCordic				Signature [Signature]		Month Day Year 11/10/03																																									

EPA Form 8700-22 (9-99)  
Previous editions are obsolete.

COPY 2 FACILITY DETACH & RETURN THIS COPY TO GENERATOR

**ATTACHMENT 2**

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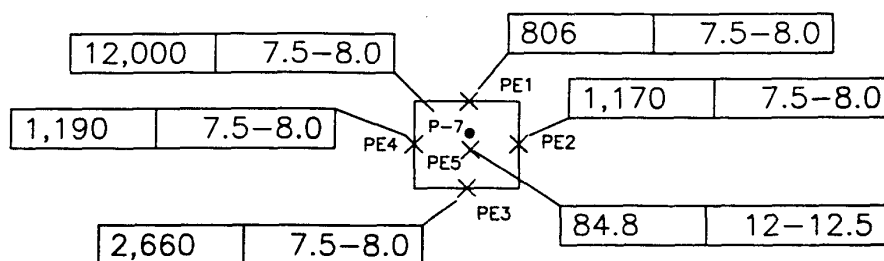
**ATTACHMENT 2**

Hot Spot Removal – Sample Location P-7



MW-20

B



0 20 FT.  
APPROXIMATE SCALE

#### EXPLANATION

- MW-20 EXISTING MONITORING WELL  
P-7 SOIL BORING LOCATION  
PE1 POST-EXCAVATION SAMPLE LOCATION

806 7.5-8.0 - DEPTH (FT)  
Pb CONCENTRATION (ppm)

#### Notes:

- 1) Pb = Lead
- 2) ppm = parts per million

### TRC Raviv Associates, Inc.

57 E. Willow Street Millburn, NJ 07041

LEAD HOT SPOT EXCAVATION AT P-7  
POST-EXCAVATION SAMPLE RESULTS

Former Celotex Industrial Park - Edgewater, NJ

PREPARED BY: JR/LB

DATE: MARCH 2004

JOB NO.: 01C2084

FIGURE: 1

2084-67 -03/30/04

305110

**File I**  
**Lead Hot Spot Excavation at P-7**  
**Post-Excavation Sample Results**  
**Celotex - Edgewater, New Jersey**

Client ID:	PE-1	PE-2	PE-3	PE-4	PE-5
Sample Depth:	7.5-8.0	7.5-8.0	7.5-8.0	7.5-8.0	12-12.5
Lab ID:	00710-002	00710-003	00710-004	00710-005	00710-006
Date Sampled:	1/23/2004	1/23/2004	1/23/2004	1/23/2004	1/23/2004

Metals (ppm)	USCC	RSCC					
Lead	400	600	806	1,170	2,660	1,190	84.8